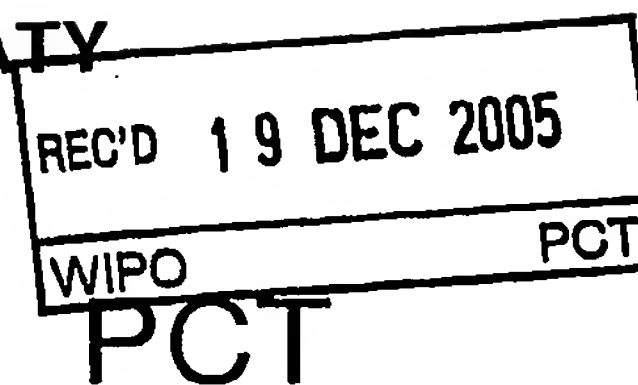


PATENT COOPERATION TREATY



From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2005/000039

International filing date (day/month/year)
07.01.2005

Priority date (day/month/year)
07.01.2004

International Patent Classification (IPC) or both national classification and IPC
A61K45/00

Applicant
POLYTHERICS LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for International preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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Authorized Officer

Engl, B

Telephone No. +49 89 2399-8283



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2005/000039

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2005/000039

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
- ☐ paid additional fees.
 - ☒ paid additional fees under protest.
 - ☐ not paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☒ complied with
 - ☐ not complied with for the following reasons:
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☒ all parts.
 - ☐ the parts relating to claims Nos.

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-77
Inventive step (IS)	Yes: Claims	
	No: Claims	1-77
Industrial applicability (IA)	Yes: Claims	1-77 (see separate sheet)
	No: Claims	

2. Citations and explanations

see separate sheet

Concerning Section V:

The following prior art is cited from the International Search Report:

- D1: EP-A-1 031 353 (STIEFEL RESEARCH INSTITUTE, INC) 30 August 2000 (2000-08-30)
- D2: US-A-5 753 256 (CORDES ET AL) 19 May 1998 (1998-05-19)
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- D8: KREUTER ET AL.: "MODE OF ACTION OF IMMUNOLOGICAL ADJUVANTS SOME PHYSICOCHEMICAL FACTORS INFLUENCING THE EFFECTIVITY OF POLY ACRYLIC ADJUVANTS" INFECTION AND IMMUNITY, vol. 19, no. 2, 1978, pages 667-675
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D1 describes compositions comprising antimycotic agents and a poly(meth)acrylic copolymer. **D2** describes a plaster containing an antimycotic embedded in a matrix consisting of acrylate copolymer. **D3** describes vaccine compositions for immunizing an animal against infection by *Mycoplasma hyopneumoniae*, comprising inactivated *Mycoplasma hyopneumoniae* bacterin and an adjuvant mixture comprising an acrylic acid polymer and a mixture of a metabolizable oil and a polyoxethylene-polyoxypropylene block copolymer. **D4** describes several therapeutic uses of Amphotericin B. **D5** describes a polymeric drug obtained by polymerizing acrylic or methacrylic acid derivatives to which a physiologically active substance, such as Amphotericin B (column 2 line 30) is bonded via

an ester linkage; the polymeric drug has a polydispersity of 1.1 or less, i.e. a narrow molecular weight distribution. **D6** describes a liquid polymer composition which comprises a sustained release acrylic polymer and a pharmacological agent (column 8 lines 42-47), in particular an antifungal agent, preferably amphotericin B (column 13 lines 23-36). **D7** describes the usefulness of Amphotericin B for treating *inter alia* leishmaniasis (page 2 line 21). **D8** discloses polyacrylic immunological adjuvants. **D9** and **D10** describe acryl group containing polymer precursors with narrow molecular weight distribution for producing polymer therapeutics and pharmaceutical compositions; on page 26 of D9 and page 595 of D10, a doxorubicin-polymer conjugate is disclosed.

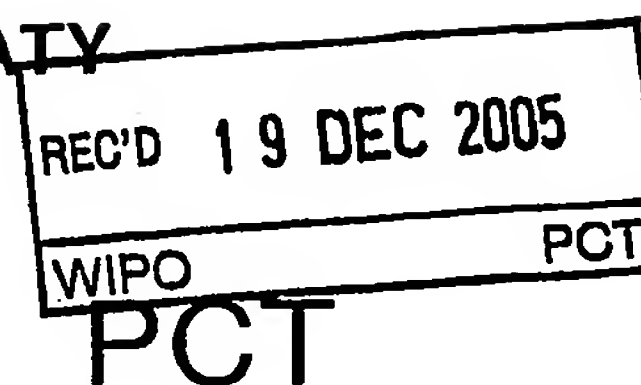
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If novelty could be established, then an inventive step (Article 33 (3) PCT) might not be acknowledged since the advantageous properties of narrow molecular weight distribution acrylic polymers as well as the pharmacological properties of Amphotericin B are known from the prior art.

The expressions "a substance that has pharmacological activity against a pathogenic organism", "a substance that has pharmacological activity against a cancer" and "agents selected from antigens and immunogens" are considered to lack support in description, which is concerned mainly with (a complex that comprises) amphotericin B (and a polymethacrylic acid polymer). Furthermore, the said expressions are directed to an infinite number of possibilities and do not therefore define the subject-matter for which protection is sought (Article 6 PCT).

Claims directed to methods of therapy might be found inadmissible.

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Authorized Officer

Engl, B

Telephone No. +49 89 2399-8283



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2005/000039

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